

Amendments to the Claims

This listing of claims replaces all previous listings of claims.

1. (Currently amended) A method of diagnosing Crohn's disease in a subject, the method comprising providing a test sample from a subject with symptoms of Crohn's disease; and

~~determining whether~~ identifying at least one specific anti-glycan antibody ~~is present~~ in said sample, wherein said at least one specific anti-glycan antibody is selected from the group consisting of an anti-Glc (β) antibody, an anti-Glc (β 1-4) Glc (β) antibody, an anti-Glc (β 1-3) Glc (β) antibody, an anti-GlcNAc 6-sulfate (β) antibody, an anti-Dextran antibody, an anti-Xylan antibody, an anti-GlcNAc (β 1-4) GlcNAc (β) antibody, an anti-Gal 3 sulphate (β) antibody, an anti-GlcNAc (β 1-3) GalNAc (β) antibody, an anti-GlcNAc (β 1-3) Gal (β 1-4) Glc (β) antibody, and an anti-Gal (α 1-3) Gal (β 1-4) GlcNAc (β) antibody;

wherein the presence of said antibody in said test sample indicates the subject has Crohn's disease.

2. (Currently amended) The method of claim 1, wherein said method further comprises comparing the levels of said at least one specific anti-glycan antibody in said test sample to the levels of said at least one specific anti-glycan antibody in a control sample, wherein said control sample is selected from the group consisting of one or more individuals known to have or not to have a gastrointestinal disorder other than Crohn's disease.

3. (Original) The method of claim 2, wherein said control sample is from one or more individuals with a gastrointestinal disorder that is irritable bowel syndrome or ulcerative colitis.

4. (Original) The method of claim 2, wherein said control sample is from one or more individuals that do not have a gastrointestinal disorder.

5. (Currently amended) The method of claim 1, wherein said method comprises identifying ~~detecting~~ at least two of said antibodies in said sample.

6. (Currently amended) The method of claim 1, wherein said method comprises identifying ~~detecting~~ at least four of said antibodies in said sample.

7. (Currently amended) The method of claim 1, wherein said method comprises identifying ~~detecting~~ at least six of said antibodies in said sample.

8. (Currently amended) The method of claim 1, further comprising determining whether said test sample has an anti- Mannan (ASCA) antibody, wherein the subject is assessed as having Crohn' disease if the presence of said anti-ASCA antibody is present in said sample ~~indicates the subject has Crohn's Disease~~.

9. (Currently amended) The method of claim 1, further comprising determining whether said test sample has an anti-neutrophil cytoplasmic antibodies (ANCA), wherein the subject is assessed as not having Crohn's Disease if presence of said anti-neutrophil cytoplasmic antibodies (ANCA) indicates said subject does not have Crohn's Disease are present in said sample.

10. (Currently amended) The method of claim 8, further comprising determining whether said test sample has an anti-neutrophil cytoplasmic antibodies (ANCA), wherein the subject is assessed as not having Crohn's Disease if presence of said anti-neutrophil cytoplasmic antibodies (ANCA) indicates said subject does not have Crohn's Disease are present in said sample.

11. (Currently amended) The method of claim 1, wherein said method comprises identifying ~~detecting~~ said anti- Glc (β 1-3) Glc (β) antibody, and one, two, or three of said anti-Man (α 1-3) Man (α) antibody, anti-Man (α 1-3)[Man (α 1-6)] Man (α) antibody, anti-Man (α 1-2) Man (α), anti-Man (α 1-6) Man (α) or an anti- Mannan (ASCA) antibody in said sample.

12. (Original) The method of claim 1, wherein said test sample is a biological fluid.

13. (Original) The method of claim 12, wherein said biological fluid is whole blood, serum, plasma, urine, or saliva.

14. (Currently amended) The method of claim ~~[[11]]12~~, ~~wherein said~~ wherein said biological fluid is serum.

15. (Currently amended) The method of claim 1, further comprising determining ~~the~~ an isotype of said antibody.

16. (Currently amended) The method of claim 15, wherein said at least one antibody is an IgM type isotype antibody.

17. (Currently amended) The method of claim 15, wherein said at least one antibody is an IgA ~~type~~ isotype antibody.

18. (Currently amended) The method of claim 15, wherein said at least one antibody is an IgG ~~type~~ isotype antibody.

19. (Original) The method of claim 18, wherein said IgG antibody is an anti-Glc (β) antibody, an anti-Glc (β 1-3) Glc (β) antibody, an anti-Glc (β 1-4) Glc (β) antibody, an anti-GlcNAc (β) 6-sulfate antibody, or an anti-Xylan antibody .

20. (Currently amended) The method of claim 1, wherein said at least one specific anti-glycan antibody is ~~detected~~ identified using with a fluorescent antibody.

21. (Currently amended) The method of claim 1, wherein said at least one specific anti-glycan antibody is ~~detected~~ identified using with an enzyme-linked immunoabsorbent assay (ELISA).

22. (Currently amended) A method of diagnosing Crohn's disease in a subject, the method comprising providing a test sample from a subject; and ~~determining whether~~ identifying at least one specific [[an]] anti-glycan antibody ~~is present~~ in said test sample, wherein said at least one specific anti-glycan antibody is selected from the group consisting of an IgG Glc (β 1-3) Glc (β) antibody and an IgG anti-Man (α 1-3) Man (α) antibody, wherein the presence of said at least one specific antibody in said test sample indicates the subject has Crohn's disease.

23. (Currently amended) The method of claim 22, wherein said method comprises ~~detecting~~ identifying an IgG anti-Glc (β 1-3) Glc (β) antibody in said sample.

24. (Currently amended) The method of claim 23, wherein said method comprises ~~detecting~~ identifying an IgG anti-Man (α 1-3) Man (α) antibody in said sample.

25. (Currently amended) The method of claim 22, wherein said method comprises ~~detecting~~ identifying an IgG Glc (β 1-3) Glc (β) antibody and an IgG anti-Man (α 1-3) Man (α) antibody in said sample.

26. (Currently amended) The method of claim 22, wherein said method further comprises determining whether said sample has an IgG anti- Mannan or an IgA anti- Mannan antibody, wherein ~~the presence of~~ said subject is assessed has having Crohn's Disease if said IgG anti- Mannan or IgA anti- Mannan antibody is present in said sample ~~indicates said subject has Crohn's disease~~.

27. (Original) The method of claim 26, wherein said method comprises determining whether said sample has an IgG anti- Mannan antibody.

28. (Original) The method of claim 26, wherein said method comprises determining whether said sample has an IgA anti-Mannan antibody.

29. (Currently amended) The method of claim 26, wherein said method further comprises determining whether said sample has ~~[[an]]~~ anti-neutrophil cytoplasmic antibodies (ANCA), wherein ~~the absence of said antibody in said sample indicates~~ said subject ~~has~~ is assessed as having Crohn's disease Disease if said ANCA are absent in said sample.

30. (Currently amended) A method of differentially diagnosing Crohn's disease or inflammatory bowel disease in a subject with symptoms of Crohn's disease or inflammatory bowel disease, the method comprising providing a test sample from a subject; and ~~determining whether~~ identifying at least one specific said antibodies are antibody present in said sample, ~~said antibodies comprising~~ wherein said at least one specific antibody is selected from the group consisting of

anti-neutrophil cytoplasmic antibody (ANCA),

IgG anti-Glc (β 1-3) Glc (β)₁

IgG ASCA; and

IgA ASCA,

wherein ~~the~~ absence of ANCA and ~~the~~ presence of at least one of said IgG anti-Glc (β 1-3) Glc (β)₁ IgG ASCA, and IgA ASCA antibodies in said test sample indicates the subject has Crohn's disease, and

wherein ~~the presence of at least one of said antibodies in said test sample indicates the~~ subject ~~has~~ is assessed as having inflammatory bowel disease (UC or CD) if ANCA is absent and at least one of said IgG anti-Glc (β 1-3) Glc (β), IgG ASCA, and IgA ASCA antibodies are present in said test sample.

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Claims 31-42 (Canceled)